

AMENDMENTS TO THE CLAIMS

A detailed listing of all claims that are, or were, in the present application, irrespective of whether the claim(s) remains under examination in the application are presented below. The claims are presented in ascending order and each includes one status identifier. Those claims not cancelled or withdrawn but amended by the current amendment utilize the following notations for amendment: 1. deleted matter is shown by strikethrough; and 2. added matter is shown by underlining.

Claims 1-14 (Cancelled).

Please add new claims 15-32 as follows:

15. (New) A heat pipe for use in extracting heat from a semiconductor light source having an active region, the heat pipe comprising one of a transparent and translucent member, said member formed of a thermally conductive material and defining an optical transmission path therethrough, the heat pipe being adapted to be located proximate to the active region of the semiconductor device to extract heat, when in use.

16. (New) A heat pipe according to claim 15 wherein said optical transmission path is provided by means of a channel which runs through the heat pipe.

17. (New) A heat pipe according to claim 16, wherein said channel is arranged to receive optical transmission means.

18. (New) A heat pipe according to claim 15, wherein the one of the transparent and translucent member comprises a hollow pipe with sealed ends.

19. (New) A heat pipe according to claim 15, wherein the heat pipe is at least partially filled with a cooling fluid.

20. (New) A heat pipe according to claim 19, wherein said cooling fluid is placed under a partial vacuum.

21. (New) A heat pipe according to claim 15, which transports liquid by capillary action.

22. (New) A heat pipe according to claim 16, wherein a bundle of optical fibres is disposed in said channel.

23. (New) A heat pipe according to claim 17, wherein a bundle of optical fibres is disposed in said channel.

24. (New) A heat pipe according to claim 23, comprising a cool end and a hot end, the hot end closer to the active region of the semiconductor device than the cool end, and wherein said optical fibres are substantially circular in cross-section, said optical fibers defining

gaps between said optical fibres, said gaps defining capillary channels by which heated coolant fluid, said coolant fluid being in the state of at least one of liquid and vapor, can be transported towards the cool end of the heat pipe, and by which condensed liquid can be transported from the cool end of the heat pipe back to the hot end.

25. (New) A heat pipe according to claim 24, wherein said optical fibres are located around the periphery of the heat pipe such that a channel is defined through the centre of the pipe, by means of which coolant fluid can flow.

26. (New) A semiconductor light source comprising a heat pipe according to claim 15.

27. (New) A semiconductor light source according to claim 26, further comprising a condenser.

28. (New) A combination heat pipe and semiconductor light source, the semiconductor light source having an active region, the heat pipe for use in extracting heat from the semiconductor light source, the heat pipe comprising a member formed of a thermally conductive material and defining an optical transmission path therethrough, the heat pipe being adapted to be located proximate to the active region of the semiconductor device to extract heat, when in use.

29. (New) A combination heat pipe and semiconductor light source according to claim 28, wherein said optical transmission path is provided by means of a channel which runs through the heat pipe and wherein said channel is arranged to receive a bundle of optical fibers, and wherein the heat pipe has a coolant fluid therein.

30. (New) A combination heat pipe and semiconductor light source according to claim 29, wherein the bundle of optical fibers defines a plurality of gaps and wherein the gaps define capillary channels for flow of the coolant fluid.

31. (New) A combination heat pipe and semiconductor light source according to claim 15, wherein the heat pipe is at least partially filled with coolant fluid.

32. (New) A method of cooling a light emitting diode having an active region, the method comprising the steps of placing a heat pipe as claimed in claim 15 proximate the active region.